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## Fig. 1B.

Arg Phe CGC TTC GAA G1n CAA Phe Thr TTT ACT Ala GCT TYL Leu Tyr Gly Phe Cys Ser Pro Lys Thr Leu Gln Cys Ala Pro TAT GGC TTC TGT TCA CCC AAG ACA CTC CAA TGT GCT CCA Trp Leu Ile Asn TGG CTG ATT AAT cys TGC TCC Thr TYL Phe Ser Cys Ala Leu Leu Thr Ser Arg Tyr Lys Leu Thr Val Pro Ser Val Asp TCC GTG GAC Glu Leu Ser Val Tyr Thr Leu Thr Val Ile Thr Leu Glu Arg Trp His Thr Ile Thr GAA CTC TCT GTC TAC ACC CTG ACG GTT ATC ACC CTG GAA AGG TGG CAC ACC ATC ACC Pro Met Asp Val CCC ATG GAT GTG Lys Ala Ala Gly GCA GCT GGC Trp Leu Phe TGG CTC TTT Glu Leu Thr Ala Pro Asn Lys Asp Thr Lys Ile Ala GAG CTG ACA GCT CCT AAC AAG GAC ACA AAA ATT GCT Val Ile GTC ATC Phe Leu Arg Val Leu Ile TTC CTT AGG GTC CTG ATT GIY Leu Tyr Leu Leu Leu Ile Ala GGG CTC TAC CTG CTG CTC ATT GCC Cys Leu 1 TGC CTC ( Gly Gly GGA GGA Val Gly Gln Tyr Tyr Asn His Ala Ile Asp Trp Gln Thr Gly Ser Gly Cys Gly GGC CAG TAC TAT AAC CAC GCC ATA GAC TGG CAG ACA GGG AGT GGC TGC GGT Phe Ala GCC Val Gln Leu Asp Gln Lys Leu Arg Leu Arg His Ala Ile Pro Ile Met Leu GTA CAG CTA GAC CAA AAG CTA AGA CTG AGG CAT GCC ATC CCA ATT ATG CTC GIY Ile Ser Asn Tyr Met Lys Val Ser Ile Val Val GTG GTG Tyr Ala Leu Ile Leu Asn TTA ATC CTC AAC Gly ပ္သည္ဟ Cys Met TGC ATG Leu Phe Val Met Trp Asp Tyr Asp TGG GAT TAT GAT Glu Asp Ile GAA GAT ATT Leu Ser Phe Ala Asp Phe CTC TCC TTT GCA GAC TTT Tyr Ile Leu Ser Ile TAC ATA TTA TCC ATC Ala Val Gln Asn Pro GCA GTT CAA AAT CCA Gly Asn Leu Thr Val GGC AAC CTG ACA GTC 61y 660 Cys TGT Ala Thr Met Pro Leu Val GCC ACG ATG CCC CTT GTG Glu Leu Ser GAA CTC AGT Phe Asn Pro TTC AAC CCC Gln Val Tyr Phe TAC TTT Cys Asn TGT AAT Phe Val Phe Ala Ser GTG TTT GCC AGT Glu Glu Asn GAG GAG AAT Ala GCT Ala Ile Ser Leu Ala Ile CTA GCC ATC Ile Pro Asp CCA GAT Thr Lys ( Leu Met CTC ATG Leu Arg Ile Val Ile Thr 1276 300 325 1051 350 450 1426 475 500 1576 375 425 525 1651

## Fig. 1C.

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Val	Phe	Arg	Ser	His	AGGA FITTA FITCO FICCO ACCO
Lys Aaa	Pro	Lys	Ala GCA	Thr	CAGI VAGGI VAAA VITAGI VICTAGI
Phe	Asn	Cys	GLY	Leu TTA	GCTJ HTTGA HTTGA CCTTC
Ala	Ala	Cys TGC	Pro	Ala GCG	ACCI CAGA GAGG AGCC
Ala GCT	Cys	Gly Cys Cys Lys GGC TGC TGT AAA	Phe TTC	Arg	TTGT AATO AATA TCTA CAGG
Ser	Ser	Phe	<b>G1y</b> GGC	Pro	AGAA GCTTC GGTA CCTAT TGGC
Ile ATC	Asn	Arg	Asn	Pro	CAGG ATTA GCAT AGCT AATC
Ala	Val	Ser	Lys	Ile	ACTT AATT ATAT CCCTT AGCC GTAC
Phe TTT	Pro	Leu	Cys	Pro	AGGC CCAA CCCAA CCTAG TATT
Thr Cys Met Ala Pro Ile Ser Phe Phe Ala Ile Ser Ala Ala Phe Lys ACG TGC ATG GCG CCC ATC TCT TTT GCC ATC TCG GCT GCC TTC AAA	Lys Ile Leu Leu Val Leu Phe Tyr Pro Val Asn Ser Cys Ala Asn Pro Phe AAA ATC TTA CTG GTC CTT TTT TAT CCT GTC AAT TCT TGT GCC AAT CCA TTT	Leu Leu Leu Ser Arg CTT CTG CTG AGC CGA	Ser Asn Cys TCC AAC TGC	Cys Gln Gln Pro Ile Pro Pro Arg Ala Leu Thr TGT CAA CAG CCC ATA CCA CCG AGA GCG TTA ACT	TTTAAAAAGTGTTTTAGAAAATATTTATCCTTAGGCACTTCAGGAGAATTGTACCTGCTTCAGAGGAC GAAGGTTTAAGAAATTTTATAGGCATAATTTTTTTTTT
Ser	Phe	Leu	Ser	Gln	TTAT TTTA TGTG GTGA TACA TACAG
Ile ATC	Leu	Leu	Thr	Cys	ATAT GETAA GCAG ATCA GGCT
Pro CCC	Val	Phe Leu TTC CTT	TYT	His	AAAAAATTA
Ala	Leu	Asp	Ala GCA	Val GTG	TTAG TTTTT TGTG TGCAG CTGT AAGC
Met	Leu	Arg	Ser	Thr	TGTT GAGA GAGA GAGA GCAGA
Cys TGC	Ile	Gln	<b>Phe</b> TTT	Ser	TATE TARE
Thr	Lys	Phe TTT	Glu GAA	Leu TTG	TTTAP SAAGO TTCAT TCACA TCACA
Phe	Ser TCG	Ala GCG	Lys	Lys	TTTT CAGG AAAT GAGG
Asp	Asn	Lys	Arg	Leu	NTATO GACA TGACA NCTAG NCTAG
Thr	Thr	Thr	Arg Aga	Thr	TAAA TOTOT TOTOT TOOCA
Phe	Val GTC	Phe	Tyr	Ala GCT	TEGO TAGA TAGA TAGA TAGA TAGA TAGA TAGA
Ile ATC	Thr	Ile ATC	Leu	Gln	ATTTE
Leu	Ile ATC	Ala	Glu GAG	Ser	TAGCATTACAAAATTGTGCCTAAATATGTTTTTAAAAAGTGTTTTTAGAAAATATTTATGCCTTAGGCACTTCAGGAGAATTGTACCTGCTTCAGAGGAC GGCCTATACCAAAATTTGTGTGTAGGAGGTTTAGGAAATTTTTATAGCAAATATTTTTGTTGTAAATTTTGTAAATTTAA TAAGTTGTCATTTTTCACGTCTCTGACATTTTCAATTTTTTTT
Ile	Leu	TAT	Ala GCG	Pro	CAAC CAAC CAAC CAAC CAAC
Ala	Pro	600 Leu Tyr Ala Ile Phe Thr Lys 876 CTG TAT GCG ATC TTC ACG AAG	625 Arg Ala Glu Leu Tyr Arg Arg Lys 951 CGG GCG GAG CTT TAC AGA AGG AAG	650 Lys Pro Ser Gln Ala Thr Leu Lys 026 AAG CCG TCC CAG GCT ACC CTG AAG	TAGG GGCC AATTC ATTC TCTT
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EL		HNI WYFGRAFCYFONLEPITAMFVSIY	VMGLAVVPFGAAHIL MKMWTFGNFWCEFWTSIDVLCVTASIE 12	
LH/CGR	RHO	SKR	B-2AR	5HT-2R

	483	175	169	172	191
TM-4	HICGR TELTVITLERWHTELTYAVOLDOKLRLRHAIPIMLGGWLFSTLIATMPLVGI	O SLVVLAI ERYVVVCKPIMSNFRF GENHAI MGVAFT WV MALACAAPPLVGW	SMTA	TLCVI AVDRYFAITSPFKYOSLLTKNKARVI	HT-2R HLCAISLDRYVAIQNPIHHSRFNSRTKAFLKIIAVWTISVGISM-PIPVF
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# Fig. 2B.

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575	280	278	301	329
I AKKMAI LI FTDFT - CMAPI SFFAISAAFKVP	EKEVTRMVI I MVI AFLI CWL PYAGVAFYI FTHOG	KKKKFVKT MVLVVVTFAI CWLPYHLYFI LGTFGED	EHKALKTLGI I MGTFTLCWLPFFI VNI VHVI ODN	IEGKACKIVLGIVFFLFIVNMWCPFFITNIMAVICKE
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IYFAVQNPE	LVFTVKEAAA (8) QK	IGLTLWRRSV	VFQEAKROL	SLOKE
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#### TA-7

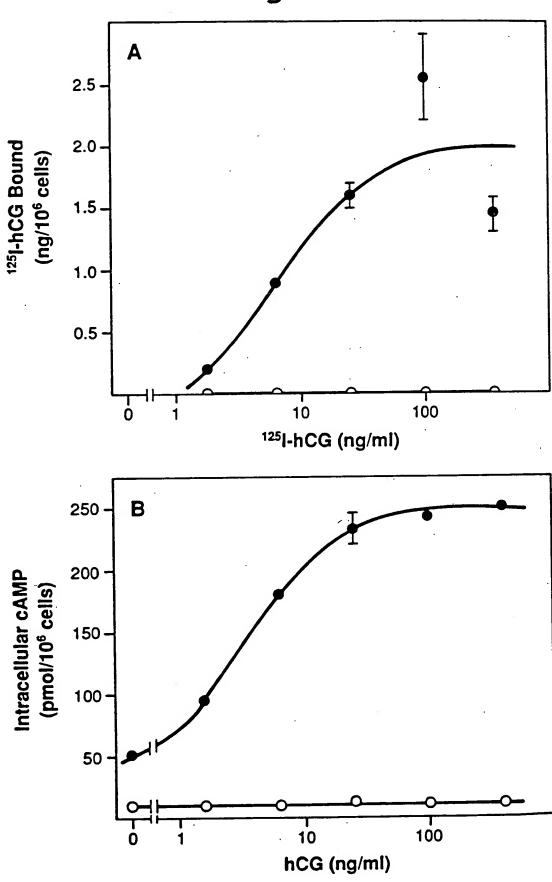
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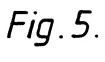
### Fig. 3.

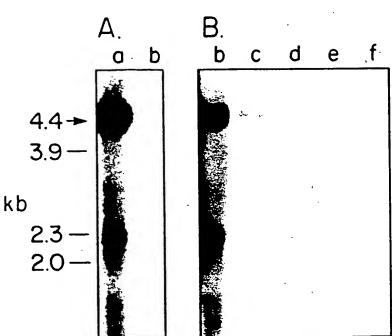
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7/12 Fig.4.







CTC GGC AAT TTA GAT CAG ATC GAA GCC Ala SCT Ala GCT AGGAGCCTGG GGAATCTGTG GAAGTTTTCG CGCTGATGCA GAAAGAAAGT CGGTGAATGG AAC Cys GAT GAG Glu GGA Gly CCT CCA TGG GAT CAT Lys Lys 11C Phe CTA Lec cAG Gla AAC CTC ET3 TGC CTC Leu CCC Pro SCC Ala TTG ATA Ile AGC Ser GGA CAG Gln AAG Lys CCA AAG Lys Lec Ľ\$¥ CTA GAG Glu CAC AAC Asn ATT TTC GTG Val GAC ACG CAA GAT ATT AAG AAC CCG Asn Pro GAT GAG Glu GTG Val ACT GTT TTA AAA Lys AGC AAC Asn TCT CA Gla AAC Asn ပ္ပင္သ ပင္သ AGT GGA Gly GAC TTG CCC Pro TGC Cys TTT TTT TGC Cys TCC GTC Val TTG AGG TCC AGA GAA Glu ATC င်္ဂ ၁၁ ATT gra gra CGC TAC CTC Leu 5.53 5.53 5.53 GAC AAC TTC Phe Glu CCA TAC ACC CCT Pro GTC TAC TTT Phe CAA Glu ACA GAC TTT GCA Ala AAG Lys ACA CTC CAT His GAT TAC CTA AGT GCA Ala TTG AAT CTT CTG Asn Leu Leu ASO GAT CTG Leu GTC ATT TTT TCA CTT 666 61y ATG M t AAG Lys CTA CAA Clu ACA Thr AGC GCA 7CC Ser CTC TGT AAT AGG Asn Arg GGA TTG GAA Glu ATG Met CCA GAA Glu GCC GAG Glu GGA AAC Asn AGG AGG ATT AAC ATA 11e GTT GCT TCC TCA SCC Ala GAG Glu 11G TCT CAA Glu GAC TTA Leu ATG Met AAC AAG Lys CAC CGG TTT ATA Ile GTC Val G CA AGG ATG Met SCC Ala TTC ATA Ile AAT ATC CTG Leu TGC CCC Pro TCA GTA Val CTG GAA Glu AAT GAT CTG Lea CTC CTC CTC CA Gla ACC AAG Lys CTC Les TCC CAT His el Slo CTC CTC Les GGA Gly TAT GAT AAC CGG AAA Lys GTG AAC GAA Glu TTA AAG ACC TCT GAA Glu AGA TGT GAC £\$¥ TTG ATG GCC TTG Met Ala Leu AAG Lys GAT GGA Gly GAT Asp GAT AAG GTC Pro CTC Lea CAG Gln AGG ATT ATT TGG CTG Trp Leu Acc ATT GTC 666 617 CTG TTG ATT TAT GTT TTT ATC SCC Ala AGC GTC GAT AGT ATC 11e AGG CCG Pro ASO AAG GAT AGT AAT GTT CCA AAG Lys GTT Ash CAC ATT CCC Pro Leu ATT GTC Val Ash ATAAATAAGG CA Glu CCC Pro SPA Cla GCA Ala CAT (His ck Clu GAC cks clu ខ្លួ CAC ATC AAG Ash 000 010 GAG Glu CGA CAN Clu CTC AAT TTA TTT AGG CAC AGT CTC TCT AAT GTT ACA CAT TCT Ser 831 891 281 951 301 1011 711 241 471 591 **651** 201 531 231 291 81 351 411

Fig. 6A.

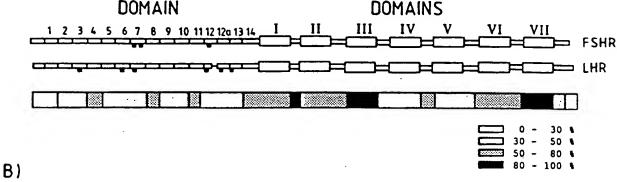
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TTT	CAA	ATA	AAC	Phe	ATC	CTA Val	TAC	CTT	CAC	SCC Ala	TTT Phe	CTA	AAG Lys	GCC	CAC	TCC	GCAGGCCATG GCAGACTGAT AAACAAAGCA		
TGG	AGC	TGC	CAC	GTC Val	ACC	ATG	AGC	TAT	Acc	ATT	TTC	CTC	ACC	CAA Gln	AGC	TCA	CTTCTGAAGA TCTCTGCATG ACAGCAAATA		
ATA	ACA	CTC Leu	TAC	ACT	CAT	CTC Val	AGT	55.5	TAT	AAG Lys	TCA	ATT	TTC	ATG	AAG Lys	CAT	CTG CTG CTG AA		
TTG	Acc	GAT	CAG Gln	TTC	TGG	AGC	ATC	CAG Gln	ន្តិនិ	Acc	ATT	AAG Lys	ATT	CAA Clu	CGA Arg	AST	ACA ACA		
Val	CTC	Ala	AGC	TTT	AGA	Ala	852 1952	TCA	015 015	GAC	Proc	GCC	Ala Ala	TAT	GCC Ala	CTT	ATTATGACTC TCTCTCTGGG AATAATGGTA		
AGG	CTC	Phe	AAG Lys	200	Glu	Ala	Phe	11G	To To	AGC	A14	AAG Lys	TAC	TGT	CAT	CCT	TATE		
CIC	CTC	Ala	ACC	Ala	Lea Sea	CAT	ATC	CCT	ATC	TCA	ATG	TCC	CTC Sea	660 617	TTC	GTC Val	252 554		
ATC Ile	CTC	CTC Lea	CAT	Ala	P AC	CGG	SS	AGC	GTC Val	TCA	TGC	GTG Val	TTC	TTT	AAC Ash	CTT	AAAGACA TAATTTAA ACACTTA		
AAC	GTG Val	AAC	ATC	GAT	ATC	553 5 3	TTC	GAC	org Val	TCC	CTC	ACT	CCT Pro	AAG	CAC	GTG	TTGN TCTN		
TAC	ACA	TS S	GAC	TGT	Ala	CAG Gln	7.23 5.23	ATC	TTT	GTG Val	TTT	ATC	AAT	AGC	ACC	TAC	ACC 1		
GGG Gly	Acc	ATG Met	GTT	660 61y	Thr.	GTG Val	Ala	GAT	Ala Ala	ATT	GAC	CTC	Ala Ala	CTG	Ala	AGT	225		
ATG Met	AAC.	rear Tage	TCA	SCA	TTC Leu	AAG	Ala	ATG	CTG Leu	Acc	ACA	CCG Pro	16T 2X3	CTG	TCC	AAT	GCACA		
ATC	85	TTT	Ala	GGA Gly	P A	7GC Cys	Ala	Pro	STC	Pro	TTC	GTG Val	Ser	ATC	TCA	ACC	วีโ		
1071	1131	1191	1251	1311	1371	1431	1491	1551 501	1611 521	1671	1731	1791	1851 601	1911 621	1971 641	2031 661	2094 2166 2236		

Fig. 6B.

A)

Fig.7.

### EXTRACELLULAR MEMBRANE SPANNING DOMAINS



RELSGSR PE.P D APDGA R PGPRAGLAR..... SLTYLHVK CHHWLCHCSNRVFL.CQDSKVTEIPTDLPRNAIELRFVLTKLR 1 S S R NA D LN S LL QNTK SQA R LNEVV 41 VIPKGSFAGFGDLEKIEISQNDVLEVIEADVFSNLPKLHEIRIEKANNLL 91 RK SC RT DT S SEFNFIEC LH T 91 YINPEAFQNLPSLRYLLISNTGIKHLPAVHKIQSLQ.KVLLDIQDNINIH TIPG A Q MNN TKYG F VQSH T IS E KE IY K IVARNSFMGLSFESVILWLSKNGIEEIHNCAFNGTQLDELNLSDNNNLEE T S S LQA S SIQTILS S T SK 192 LPNDVFQGASGPVILDISRTHVHSLPNHGLENLKKLRARSTYRLKKLPNL 10 11 R PKKE.....QNFSFSIFENFSKQC 241 E TS LV T DKFVTLMEASLTYPSHCCAFANLKRQISELHPICNKSILRQDIDDMTQIG 13 EST RKA N TL SAIFEENELSGWDY GF S.PKTLO A E DQRVSIIDDEPSYG...KGSDMMYNEFDYDLCNEVVDVTCSPKPDAFNPC TM I 332 FLR LN F L 339 EDIMGYNILF<u>VLIWFISILAITGNTTVLVVLTT</u>SQYKLTVPR<u>FLMCNLAF</u> TM II TM III SQ G Y H 382 389 ADLCIGIYLLIASVDIHTKSQYHNYAIDWQTGAGCQAAGFFTVFASELS TM IV 432 Y V DQ LR IPI LG L STLI TM LV 439 <u>VYTLTAITIERWHTITHAMQLECKVQLRHAASVMVLGWTFAFAAALFPIF</u> TM V 482 VE T V ILSI I ٧ GIBSYMKVSIÇLPMDIDSPLSQLYVMALLVLNVLAFVVICGCYTHIYLTV 489 Q ELTAPNK 539 RNPTIVSSSSDTKIAKFMATLIFTDFLCMAPISFFAISASLKVPLITVSK TM VII 582 v A Q 589 AKILLVLFYPINSCANPFLYAIFTKNERRDF T. .... EF. YTSNCKNGFPGA 631 I **ETSSATHNFHARKSHCSSAPRVTNSYVLVPI** rat LH/CG recept r 560 #3 693 **PPRALTH** rat FSH r cept r SER #7 639

Fig.8.

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CHHWLCHCSNRVFLCQ - - DSK
    (20-40) VTEIPTDLPRNAIELRFV-LTK
(41-66) LRVIPKGSFAGFGDLEKIEISQNDV
1
                   E A DUF SNIPKLHEIRIEKANN
    (67- 90)
              LYINPEAFQNLPSLRYILIS-NTG
    (91-114)
              KHLPAVHKIQSLQKVLUDIQDNINHIVARNSFMGLSFESVILWLSKNG
EEIHNCAFØGTQLDEL-ØLSDNNN
   (115-139)
   (140-164)
   (165-188)
              EELPNDVEQGASGPVILDISRTK
   (189-212)
8
   (213-234) WHSLIPINHGLENIKKIRARSTYR
9
   (235-251) LKKLPNLDKFVTLMEAS
10
            LTYPSHCCAFANLKRQISELHPIC KSILRQD
   (252-283)
11
            IDDMTQIGDQRVSL
   (284 - 297)
12
   (298-325) I D D E P S Y G K G S D M M Y N E F D Y D L C N E V V D (326-348) V T C S P KPD A E N P C E D I M G Y N I L R
13
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Fig.9.

